

CLAIMS

What is claimed is:

- 1 1. A leak-stopper system for water plumbing comprising:
2 a leak-probe circuit positioned in water-detection proximity to water plumbing
3 for a building;
4 the electrical-probe circuit having electrical communication from a
5 predetermined plurality of predeterminedly spaced-apart leak sensors on the leak-
6 probe circuit to a control board;
7 visual leak signalers on the control board in electrical communication with the
8 leak sensors for electrically detecting and signaling location of any water leakage of
9 the water plumbing proximate one or more of the leak sensors to at least one of the
10 visual leak signalers on the control board;
11 the water plumbing including a plumbing valve with predetermined features for
12 shutting off water to the water plumbing predeterminedly in response to detection of
13 leakage of the water plumbing in order to allow the leakage to be fixed before water
14 damage occurs to the building or to contents of the building;
15 the leak sensors being articulated for detecting water leakage by closing of
16 circuitry of the leak sensors predeterminedly with leakage water for communicating
17 position of the leakage water by communicating position of the at least one leak
18 sensors with circuitry closed by the leakage water to predetermined visual leak
19 signalers on the control board;
20 the control board being articulated in coordination with the water plumbing and
21 the electrical-probe circuit or indicating location of the leakage water by indicating
22 location of at least one of the leak sensors with circuitry closed by the leakage water;
23 and

24 an electrical source for supplying user-safe electrical current to components of
25 the leak-stopper system for detecting leaks, for communicating their location, for
26 operating the plumbing valve and for any other related functions.

1 2. The leak-stopper system for water plumbing of claim 1, wherein:
2 the power source includes an isolated power source for supplying a user-safe
3 level of current for a predetermined period of leak-detection time in case of power
4 outage to the building.

1 3. The leak-stopper system for water plumbing of claim 2, wherein:
2 the isolated power source includes a chargeable battery that is chargeable by
3 a charger in communication with an AC power source to the building.

1 4. The leak-stopper system for water plumbing of claim 2, wherein:
2 the isolated power source includes a predetermined DC power supplier with
3 DC current from a transformer in communication with the AC power source to the
4 building.

1 5. The leak-stopper system for water plumbing of claim 1, wherein:
2 the leak sensors include three-probe sensors having an output probe
3 intermediate a first input probe and a second input probe;
4 the probe circuit is in electrical communication with the first input probe, the
5 second input probe and the output probe through input connectors;
6 the probe circuit is in return electrical communication with the input probe
7 through an output connector;
8 the first input probe and a second input probe are articulated to convey current

9 through leakage water to the output probe and the output probe is articulated to
10 receive the current through the leakage water for conveying the current from the
11 leakage water through the output connector and into the probe circuit for
12 communication to a designated visual leak signaler on the control board.

1 6. The leak-stopper system for water plumbing of claim 1, wherein:
2 the leak-probe circuit includes a valve-control line in communication with the
3 plumbing valve from the control board for closing the plumbing valve automatically
4 in response to communication of detection of a leak in the water plumbing by at least
5 one of the leak sensors; and
6 the plumbing valve is articulated to be closed for preventing water from
7 entering the water plumbing by the communication from the control board.

1 7. The leak-stopper system for water plumbing of claim 6 and further
2 comprising:
3 an override switch for manually overriding automatic closing of the plumbing
4 valve.

1 8. The leak-stopper system for water plumbing of claim 7, wherein:
2 the override switch includes a toggle switch.

1 9. The leak-stopper system for water plumbing of claim 7 and further
2 comprising:
3 an override-time regulator for regulating time of override of automatic closing
4 of the plumbing valve.

1 **10.** The leak-stopper system for water plumbing of claim 9, wherein:
2 the override-time regulator includes a rotational knob for being rotated in a
3 rotational direction predeterminedly for increase of time of override of the automatic
4 closing of the plumbing valve.

1 **11.** The leak-stopper system for water plumbing of claim 1, wherein:
2 the visual leak signalers include LED's.

1 **12.** The leak-stopper system for water plumbing of claim 1 and further
2 comprising:
3 an audio signaler of leakage on the control board.

1 **13.** The leak-stopper system for water plumbing of claim 1 and further
2 comprising:
3 a remote-control connection for optionally hard-wire or wireless remote control
4 of the control board, the plumbing valve and any other features of the leak-stopper
5 system.

1 **14.** The leak-stopper system for water plumbing of claim 1 and further
2 comprising:
3 a network connection for remote control of the leak-stopper systems that
4 includes a plurality thereof.

1 **15.** The leak-stopper system for water plumbing of claim 1, wherein:
2 the plumbing valve includes a potable-water valve.

1 **16.** The leak-stopper system for water plumbing of claim 1, wherein:
2 the leak-probe circuit includes a plurality of signal lines with each of the signal
3 lines having electrical communication from a predetermined leak sensor to
4 predetermined signaler.

1 **17.** The leak-stopper system for water plumbing of claim 1 and further
2 comprising:
3 a circuit attachment for attaching the leak-probe circuit to the water plumbing.

1 **18.** The leak-stopper system for water plumbing of claim 17, wherein:
2 the circuit attachment includes a pipe clasp.

1 **19.** The leak-stopper system for water plumbing of claim 17, wherein:
2 the circuit attachment includes a clasp tray for clasping onto the water plumbing
3 for collecting the leakage water and for conveying the leakage water to the leak
4 sensors.

1 **20.** The leak-stopper system for water plumbing of claim 19, wherein:
2 the circuit attachment includes the pipe clasp.

1 **21.** The leak-stopper system for water plumbing of claim 17, wherein:
2 the circuit attachment includes an adhesive for adhering the leak probe to the
3 water plumbing.

1 **22.** The leak-stopper system for water plumbing of claim 1 and further
2 comprising:

- 3 an electronic circuit for communicating leak detection by the leak sensors to the
- 4 visual leak signalers and for conveying shutoff communication to the plumbing valve.